What is claimed is:

1. An apparatus for continuously measuring a physiological event of a subject, comprising:

a laser source capable of directing a laser beam toward the subject that will reflect said laser beam at a skin region of the subject wherein said skin region is moveable in response to said physiological event; and

a detector capable of detecting said reflected laser beam and determining at least a velocity of said skin surface at a given moment in time.

2. The apparatus of claim 1, further comprising a processor joined in communication with said detector capable of analyzing said velocity with respect to time thereby analyzing said physiological event.

3. The apparatus of claim 1, wherein said detector comprises a laser interferometer capable of employing interferometer techniques for detecting said reflected laser beam to determine at least said velocity of said skin surface.

4. The apparatus of claim 1, further comprising a single housing to contain said laser source and said detector.

5. The apparatus of claim 2, wherein said processor is capable of producing a waveform representation of said physiological event by plotting said velocity of said skin surface with respect to time and further comprising:

a means for displaying said velocity with respect to time thereby displaying said physiological event.

6. The apparatus of claim 5, wherein said physiological event is a blood pressure of the subject and wherein said waveform representation is representative of a blood pressure waveform and contains dicrotic notch information.

7. The apparatus of claim 5, wherein said physiological event is a rate of respiration of the subject.

8. The apparatus of claim 6, wherein said processor is capable of analyzing said blood pressure to determine systolic time interval parameters.

9. The apparatus of claim 6, wherein said processor is capable of analyzing said blood pressure to determine heart rate.

10. The apparatus of claim 9, wherein said processor is capable of comparing systolic time interval parameters estimated utilizing said heart rate with systolic time interval parameters determined from said blood pressure.

11. A method for continuously measuring a physiological event of a subject, comprising:

directing a laser beam toward a skin surface of said subject that will reflect said laser beam wherein said skin surface is moveable in response to said physiological event;

detecting said reflected laser beam;

determining at least one variable related to movement of said skin surface; and

analyzing said at least one variable related to movement of said skin surface thereby producing a metric concerning said physiological event.

12. The method of claim 11, wherein said physiological event is blood pressure.

13. The method of claim 11, wherein said physiological event is respiration.

14. The method of claim 11, wherein said step of detecting comprises:

utilizing a laser interferometer and interferometer techniques for detecting said reflected laser beam and through said detection determining said one or more variables related to movement of said skin surface.

15. The method of claim 11, wherein the metric concerning said physiological event is the velocity of said skin surface.

16. The method of claim 11, further comprising displaying said metric concerning said physiological event.

17. The method of claim 15, wherein said physiological event is a blood pressure and further comprising the step of producing a blood pressure waveform representation containing dicrotic notch information by plotting skin surface velocity with respect to time.

18. The method of claim 17, further comprising the step of analyzing said blood pressure waveform representation to determine systolic time interval parameters.

19. The method of claim 17, further comprising the step of analyzing said blood pressure waveform parameters to determine heart rate.

20. The method of claim 19, further comprising the step of comparing systolic time interval parameters estimated utilizing

said heart rate with systolic time interval parameters determined from said blood pressure waveform.